

9 ii) forwarding the samples based on the next hop
10 information; and
11 c) if it is determined that the state of the next hop
12 information is not stable, then not forwarding
13 samples.
14 ~~The method of claim 1~~ wherein the next hop information (A)
15 includes an index or name associated with an interface, (B)
16 is associated with an interface, or (C) is associated with
17 a next hop destination address.

1 Claim 6 (original): The method of claim 5 wherein a link
2 terminated by the interface defines a point-to-point
3 connection with a sample destination device.

Claim 7 (canceled)

1 Claim 8 (currently amended): The method of claim 5
2 wherein a link terminated by the interface defines a
3 point-to-point connection with a sample destination device.

Claim 9 (canceled)

1 Claim 10 (currently amended): A method for controlling
2 sampling of addressed data, the method comprising:
3 a) determining a state of next hop information
4 defining a destination for samples of addressed data;
5 b) if it is determined that the state of the next hop
6 information is stable, then
7 i) generating samples from the addressed data,
8 and
9 ii) forwarding the samples based on the next hop
10 information; and

11 c) if it is determined that the state of the next hop
12 information is not stable, then not forwarding
13 samples,

14 ~~The method of claim 1~~ wherein the act of determining a
15 state of next hop information defining a destination for
16 samples of addressed data includes reading a state flag.

1 Claim 11 (original): The method of claim 10 wherein the
2 state flag is stored in a hardware register.

1 Claim 12 (currently amended): A method for controlling
2 sampling of addressed data, the method comprising:

3 a) determining a state of next hop information
4 defining a destination for samples of addressed data;
5 b) if it is determined that the state of the next hop
6 information is stable, then

7 i) generating samples from the addressed data,
8 and

9 ii) forwarding the samples based on the next hop
10 information; and

11 c) if it is determined that the state of the next hop
12 information is not stable, then not forwarding
13 samples,

14 ~~The method of claim 1~~ wherein the act of generating samples
15 from the addressed data is performed based on parameters.

1 Claim 13 (original): The method of claim 12 wherein the
2 parameters are user configured.

1 Claim 14 (original): The method of claim 13 wherein the
2 parameters include at least two parameters selected from a
3 group of parameters consisting of (a) sampling rate, (b)

4 class to be sampled, (c) protocol to be sampled, and (d)
5 run length.

1 Claim 15 (currently amended): A method for controlling
2 sampling of addressed data, the method comprising:

3 a) determining a state of next hop information
4 defining a destination for samples of addressed data;
5 b) if it is determined that the state of the next hop
6 information is stable, then
7 i) generating samples from the addressed data,
8 and
9 ii) forwarding the samples based on the next hop
10 information;
11 c) if it is determined that the state of the next hop
12 information is not stable, then not forwarding
13 samples; and

14 ~~The method of claim 1 further comprising:~~

15 d) counting some parameter of samples forwarded.

Claims 16-19 (canceled)

1 Claim 20 (currently amended): A method for maintaining
2 information used to control sampling of addressed data, the
3 method comprising:

4 a) determining a state of next hop information
5 defining a destination for samples of addressed data;
6 and
7 b) if it is determined that the state of the next hop
8 information is unstable, then ensuring that
9 information used to control the sampling of addressed
10 data indicates that the next hop information is
11 unstable,

12 wherein the information used to control the
13 sampling of addressed data includes next hop information
14 and next hop state information, and
15 ~~The method of claim 19~~ wherein the next hop information
16 includes an index or name associated with an interface.

1 Claim 21 (original): The method of claim 20 wherein a link
2 terminated by the interface defines a point-to-point
3 connection with a sample destination device.

1 Claim 22 (currently amended): A method for maintaining
2 information used to control sampling of addressed data, the
3 method comprising:

4 a) determining a state of next hop information
5 defining a destination for samples of addressed data;
6 and
7 b) if it is determined that the state of the next hop
8 information is unstable, then ensuring that
9 information used to control the sampling of addressed
10 data indicates that the next hop information is
11 unstable,

12 wherein the information used to control the
13 sampling of addressed data includes next hop information
14 and next hop state information, and
15 ~~The method of claim 19~~ wherein the next hop information (A)
16 is associated with an interface, or (B) includes a next hop
17 destination address.

1 Claim 23 (original): The method of claim 22 wherein a link
2 terminated by the interface defines a point-to-point
3 connection with a sample destination device.

Claims 24-26 (canceled)

1 Claim 27 (currently amended): A method for maintaining
2 information used to control sampling of addressed data, the
3 method comprising:
4 a) accepting configured next hop information;
5 b) determining next hop interface information from
6 the accepted configured next hop information;
7 c) determining a state of the next hop interface
8 information; and
9 d) storing the determined next hop interface
10 information and the state of the next hop interface
11 information,
12 ~~The method of claim 26~~ wherein the next hop interface
13 information is an index or name associated with an
14 interface or a logical interface of a router.

Claim 28 (canceled)

1 Claim 29 (currently amended): A method for maintaining
2 information used to control sampling of addressed data, the
3 method comprising:
4 a) accepting configured next hop information;
5 b) determining next hop interface information from
6 the accepted configured next hop information;
7 c) determining a state of the next hop interface
8 information; and
9 d) storing the determined next hop interface
10 information and the state of the next hop interface
11 information,
12 ~~The method of claim 26~~ wherein the act of determining next
13 hop interface information from the accepted configured next

14 hop information uses information in an interface list of a
15 router.

1 Claim 30 (currently amended): A method for maintaining
2 information used to control sampling of addressed data, the
3 method comprising:

- 4 a) accepting configured next hop information;
5 b) determining next hop interface information from
6 the accepted configured next hop information;
7 c) determining a state of the next hop interface
8 information; and
9 d) storing the determined next hop interface
10 information and the state of the next hop interface
11 information.

12 ~~The method of claim 26~~ wherein the act of determining a
13 state of the next hop interface information uses
14 information in a forwarding table of a router.

1 Claim 31 (currently amended): A method for maintaining
2 information used to control sampling of addressed data, the
3 method comprising:

- 4 a) accepting configured next hop information;
5 b) determining next hop interface information from
6 the accepted configured next hop information;
7 c) determining a state of the next hop interface
8 information; and
9 d) storing the determined next hop interface
10 information and the state of the next hop interface
11 information.

12 ~~The method of claim 26~~ wherein the act of storing the
13 determined next hop interface information and the state of
14 the next hop interface information includes writing the

15 next hop interface information and the state of the next
16 hop interface information into at least one hardware
17 register.

Claims 32 and 33 (canceled)

1 Claim 34 (currently amended): A computer-readable
2 ~~machine-readable~~ medium having computer-readable
3 ~~machine-readable~~ data structures stored thereon, the
4 computer-readable ~~machine-readable~~ data structures
5 comprising:
6 a) at least one parameter for controlling the
7 sampling of addressed data;
8 b) information identifying a next hop destination of
9 samples of addressed data;
10 c) information identifying a state of the information
11 identifying a next hop destination of samples of
12 addressed data; and
13 d) a forwarding table,
14 wherein the forwarding table includes a plurality
15 of entries, each of the plurality of entries including a
16 next hop index and a next hop interface.

1 Claim 35 (currently amended): The computer-readable
2 ~~machine-readable~~ medium of claim 34 wherein each of the
3 plurality of entries of the forwarding table further
4 includes a next hop address.

Claims 36-48 (canceled)